

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

No claims have been cancelled, amended or added. Accordingly, claims 1-13 are submitted for reconsideration. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Applicants appreciate the indication of allowable subject matter in claims 5-8.

In the Office Action, claims 1-4 and 9-12 were rejected under 35 U.S.C. 102(b) as being anticipated by Okamoto (U.S. Patent No. 6,045,933). Claim 1 recites that a fuel cell system comprises a fuel cell, an exhaust gas circulation passage which circulates part of the exhaust gas from the fuel cell back to the fuel cell, a fuel injection mechanism which injects liquid fuel into the circulated exhaust gas, and a vaporizer which vaporizes the injected fuel.

Okamoto discloses that a reformer 14 reforms methanol supplied from a methanol tank 12, and a hydrogen gas supply device 16 supplies hydrogen gas, which is contained in the fuel gas derived from the reformer 14, to a fuel cell 30 (column 2, lines 45-54). The reformer 14 comprises a burner 54 (column 3, lines 20-24).

Okamoto further discloses that first and second gas-liquid separators 48 and 50 and a water tank 24 communicate with each other through a passage 52 (column 3, lines 16-18). Unreacted hydrogen is introduced into a gas conduit 20 through a return passage 60 from the first gas-liquid separator 48 via a circulation pump 62 (column 3, lines 34-36).

In the rejection, it is asserted that the passage 52 of Okamoto corresponds to the exhaust gas circulation passage of claim 1. However, as described above, the passage 52 of Okamoto is a passage for returning water that was separated by gas-liquid separators 48, 50, to the water tank 24 and thus does not circulate exhaust gas.

As also described above, Okamoto does disclose that a part of the exhaust gas is circulated via the passage 60 (see column 3, lines 34-36 & Fig. 1). However, even assuming *arguendo* that the passage 60 corresponded to the exhaust gas circulation passage of claim 1, Okamoto fails to disclose or suggest that a fuel injection mechanism injects liquid fuel into

the circulated exhaust gas as recited in claim 1. Rather, Okamoto merely discloses that there is a pump 62 in the exhaust gas circulation passage from the gas-liquid separator 48 to the fuel cell 30, but no fuel injection mechanism injecting liquid fuel into the circulated exhaust gas.

Further, also assuming *arguendo* that the burner 54 of Okamoto corresponded to the vaporizer recited in claim 1, Okamoto also fails to disclose or suggest a vaporizer which vaporizes the injected fuel (which was injected in the circulated exhaust gas). Rather, as shown in Fig. 1, the burner 54 of Okamoto burns the methanol at a location entirely separated from the circulated exhaust gas. Accordingly, for all of these reasons, claim 1 is patentably distinguishable from Okamoto. Claims 2-4 and 9-12 are also patentably distinguishable from Okamoto by virtue of their dependence from claim 1, as well as their additional recitations.

Lastly, claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Okamoto in view of Hsu (U.S. Patent No. 5,747,185). Even if combinable, Hsu fails to cure the deficiencies of Okamoto. Like Okamoto, Hsu fails to disclose or suggest a fuel injection mechanism which injects liquid fuel into the circulated exhaust gas and a vaporizer which vaporizes the injected fuel. Accordingly, claim 13 is patentably distinguishable from the combination of Okamoto and Hsu by virtue of its dependence from claim 1, as well as its additional recitation.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of


papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R.
§1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 9/3/04

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